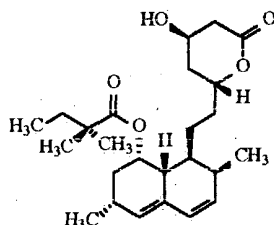


WE CLAIM:

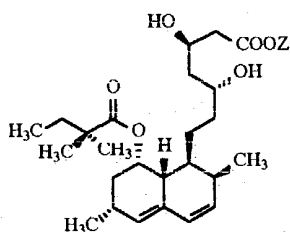
1. A process for lactonization to produce highly pure simvastatin of Formula I



Formula I

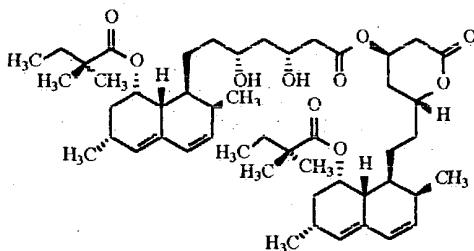
5

which comprises the steps of:



Formula II

- starting with a compound of Formula II where Z is H or NH₄,
 mixing in a mixture of acetonitrile and glacial acetic acid,
 10 reacting the mixture under anhydrous conditions wherein the dimer impurity of
 Formula III formed is less than 0.1%,

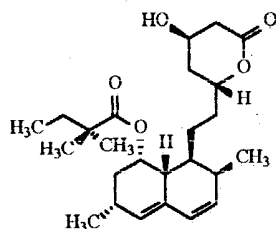


Formula III

adding water to the reaction mixture to form a precipitate of simvastatin of Formula I.

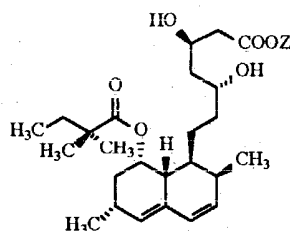
2. The process according to claim 1 wherein Z is NH_4 .
3. The process according to claim 1 wherein the said reaction temperature is $50\text{-}80^\circ\text{C}$.
4. The process according to claim 1 where the said reaction temperature is $60\text{-}70^\circ\text{C}$.
5. A process for lactonization to produce highly pure simvastatin of Formula I

5



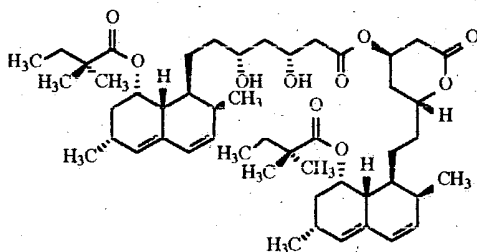
Formula I

comprising the steps of :



Formula II

- starting with a compound of Formula II where Z is H or NH_4 ,
- 10 mixing in a mixture of acetonitrile and glacial acetic acid,
 - reacting the mixture under anhydrous conditions wherein the dimer impurity of Formula III formed is less than 0.1%,



Formula III

precipitating simvastatin of Formula I from the reaction mixture,
purifying the said Simvastatin precipitate.